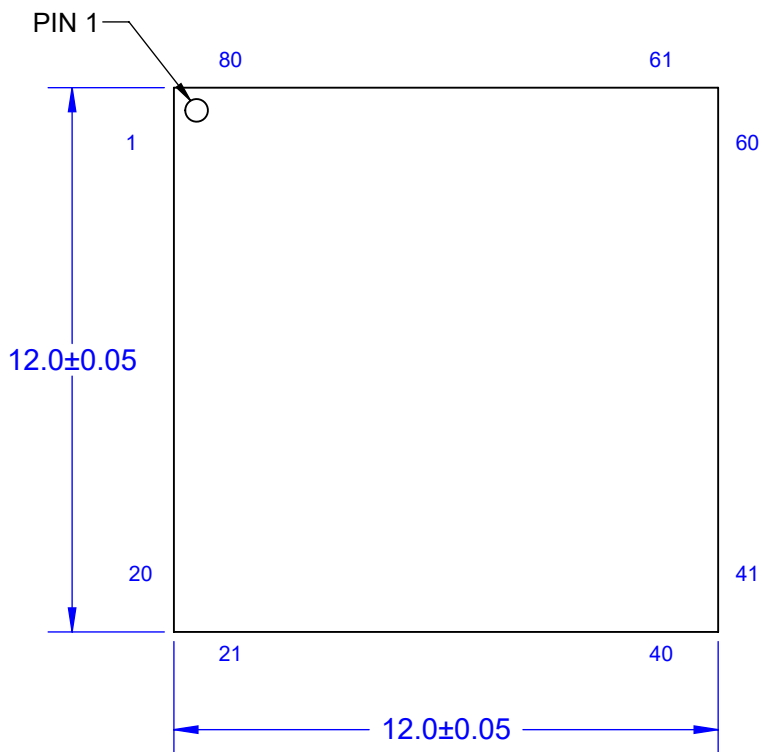
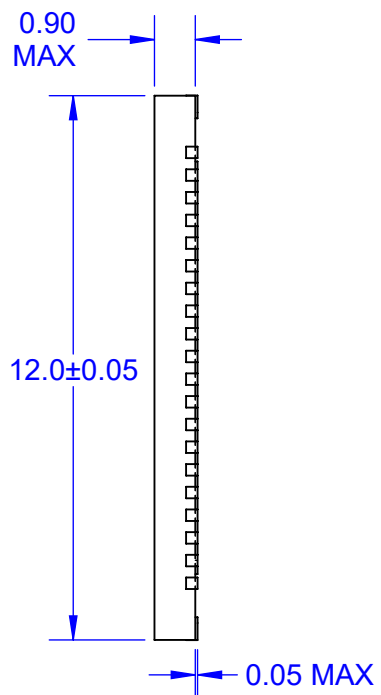


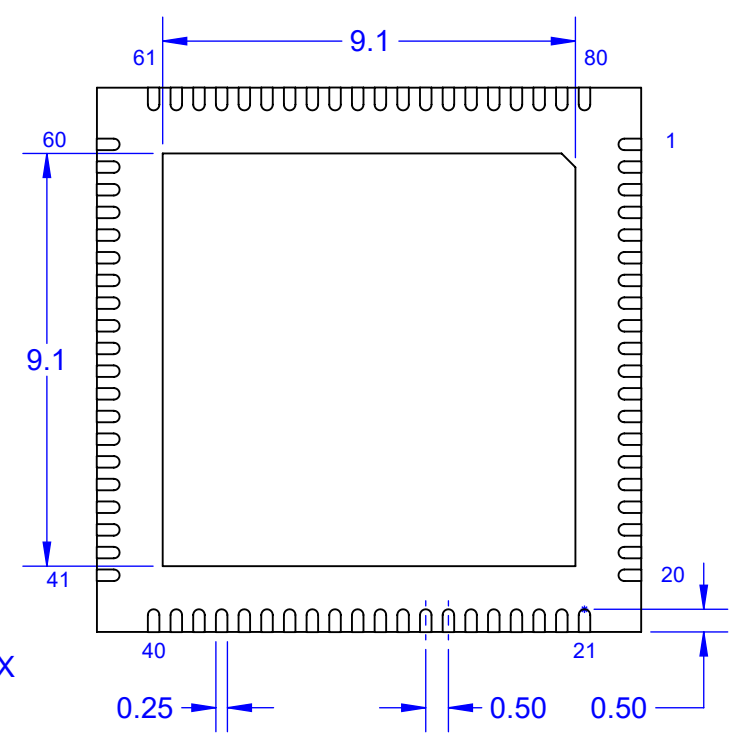
TOP VIEW



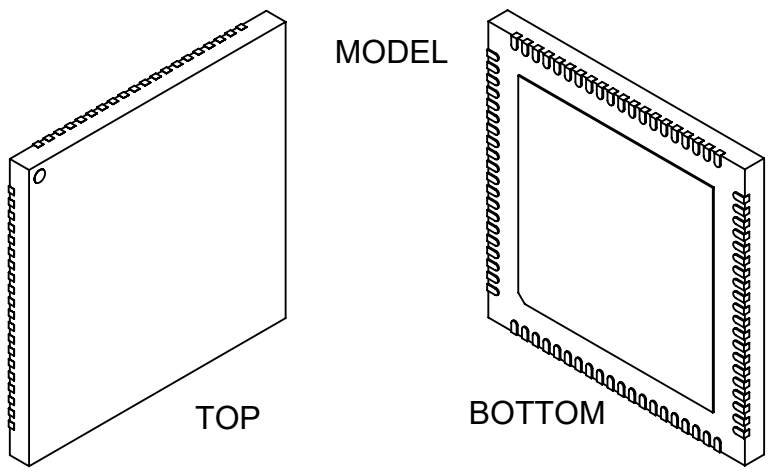
SIDE VIEW



BOTTOM VIEW



MODEL



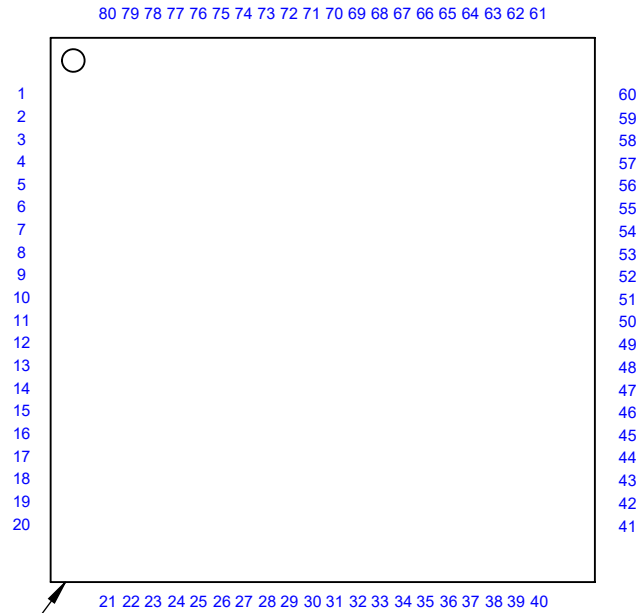
Notes: (Unless Otherwise Specified).

- 1) BODY: PLASTIC, SEMICONDUCTOR GRADE.
- 2) LEAD FRAME: COPPER, C-194 F/H.
- 3) LEAD FRAME PLATING: Sn 100 MATTE TIN.
- 4) FRAME THICKNESS: 0.203mm.
- 5) DIE PAD: 9.1 x 9.1mm EXPOSED BOTTOM.
- 6) JEDEC OUTLINE: MO-220.
- 7) DIMENSIONS IN mm.

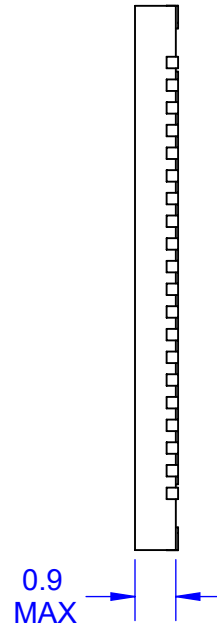
| | | | | | |
|-------------|----------|--|------|-------------|--------------|
| APPROVALS | DATE | TopLine® | | | |
| DRAWN T. Au | 04/16/16 | | | | |
| ENG M. Hart | 04/16/16 | TITLE 80-LEAD 12mm P0.5mm QFN DAISY CHAIN | | | |
| MFG | | | | | |
| QA | | SCALE | SIZE | DRAWING NO. | REV |
| CUST | | 6:1 | A | 169836 | A |
| REVISED | | DO NOT SCALE DRAWING | | | SHEET 1 OF 5 |

DAISY CHAIN PATTERN

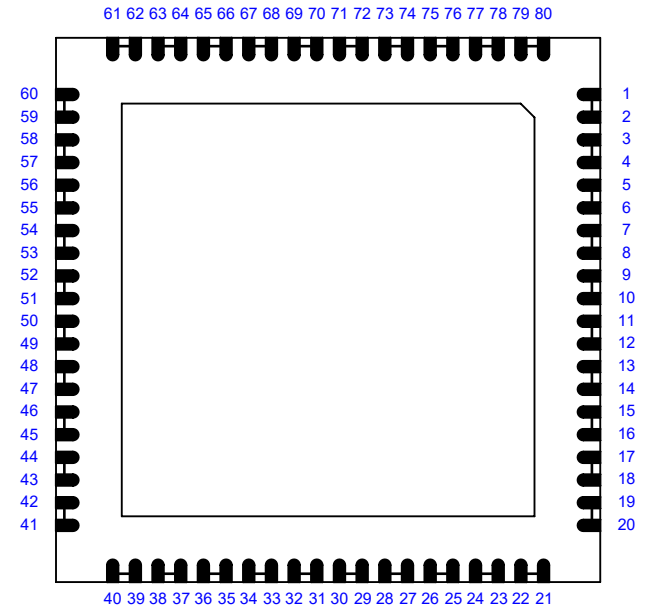
TOP VIEW



SIDE VIEW



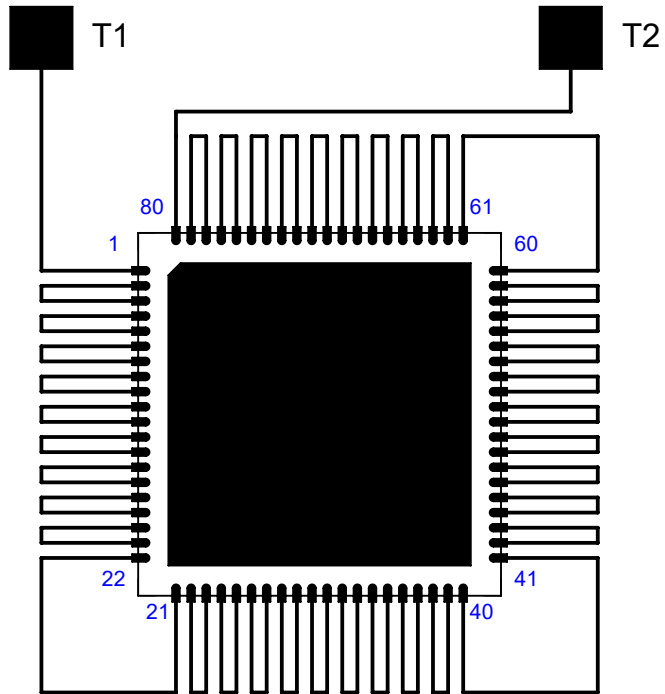
BOTTOM VIEW



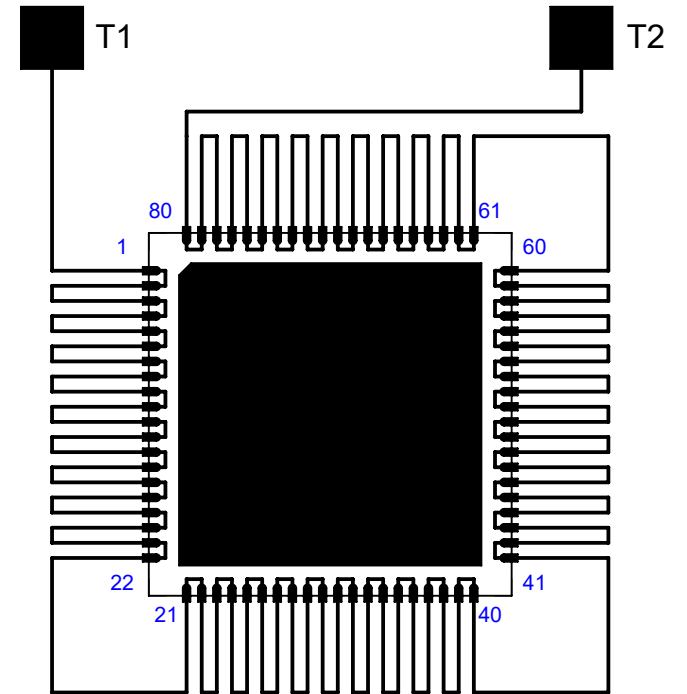
TOP SIDE ENCAPSULATION

NOTE:
1. PACKAGE DAISY CHAIN BY WIRE BONDING TO INTERNAL BOND PADS.

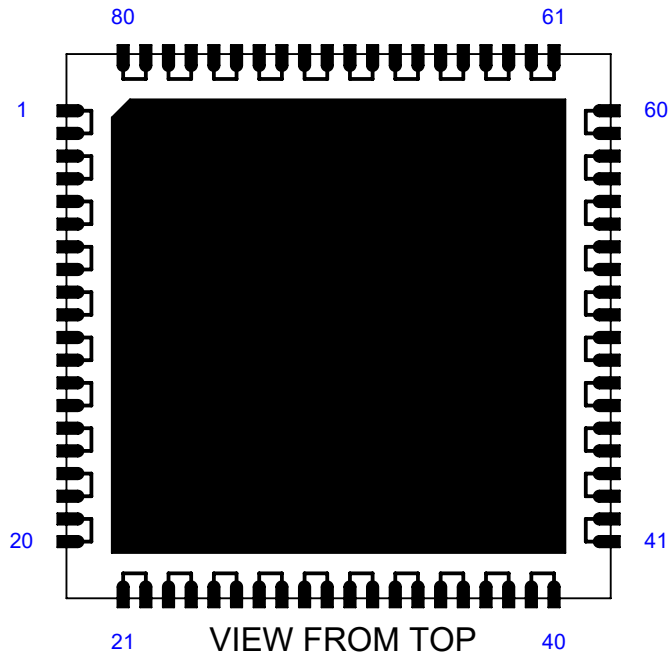
| | | | |
|----------------------------|------|--|--------------|
| TopLine[®] | | | |
| TITLE | | 80-LEAD 12mm P0.5mm QFN DAISY CHAIN | |
| SCALE | SIZE | DRAWING NO. | REV |
| 6:1 | A | 169836 | A |
| DO NOT SCALE DRAWING | | | SHEET 2 OF 5 |



RECOMMENDED
PCB PADS




AFTER MOUNTING
ON PCB

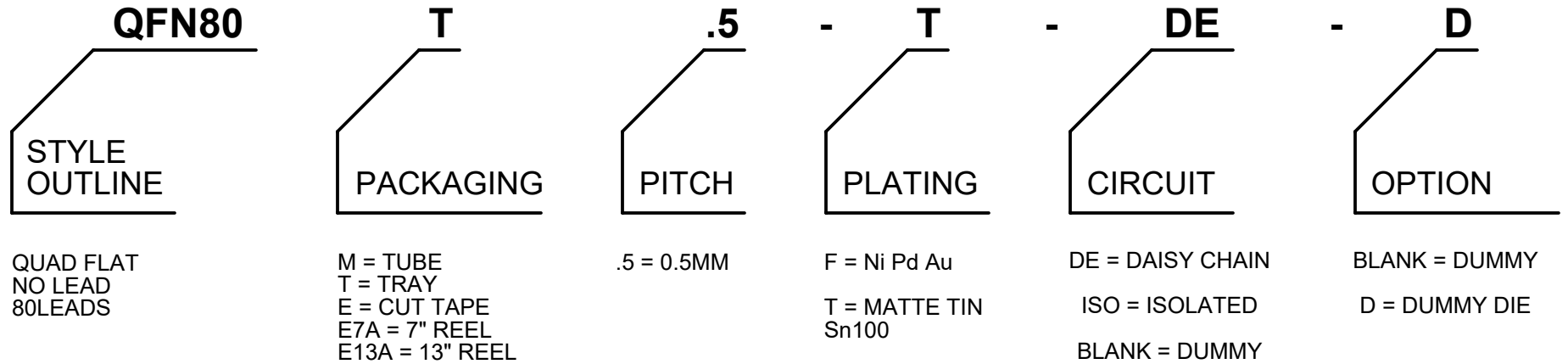


VIEW FROM TOP

| DAISY CHAIN NET LIST | | |
|-------------------------|---------|---------|
| PINS | PINS | PINS |
| 1 ~ 2 | 3 ~ 4 | 5 ~ 6 |
| 7 ~ 8 | 9 ~ 10 | 11 ~ 12 |
| 13 ~ 14 | 15 ~ 16 | 17 ~ 18 |
| 19 ~ 20 | 21 ~ 22 | 23 ~ 24 |
| 25 ~ 26 | 27 ~ 28 | 29 ~ 30 |
| 31 ~ 32 | 33 ~ 34 | 35 ~ 36 |
| 37 ~ 38 | 39 ~ 40 | 41 ~ 42 |
| 43 ~ 44 | 45 ~ 46 | 47 ~ 48 |
| 49 ~ 50 | 51 ~ 52 | 53 ~ 54 |
| 55 ~ 56 | 57 ~ 58 | 59 ~ 60 |
| 61 ~ 62 | 63 ~ 64 | 65 ~ 66 |
| 67 ~ 68 | 69 ~ 70 | 71 ~ 72 |
| 73 ~ 74 | 75 ~ 76 | 77 ~ 78 |
| 79 ~ 80 | | |

|  | | | |
|---|--------|--------------------|--------------|
| TITLE 80-LEAD 12mm P0.5mm QFN DAISY CHAIN | | | |
| SCALE 4:1 | SIZE A | DRAWING NO. 169836 | REV A |
| DO NOT SCALE DRAWING | | | SHEET 3 OF 5 |

PART NUMBERING SYSTEM

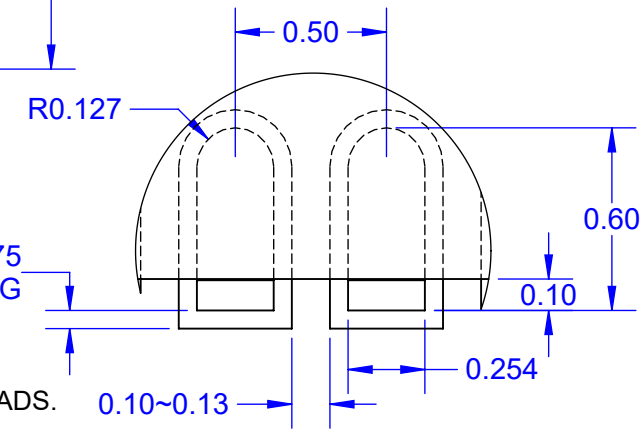
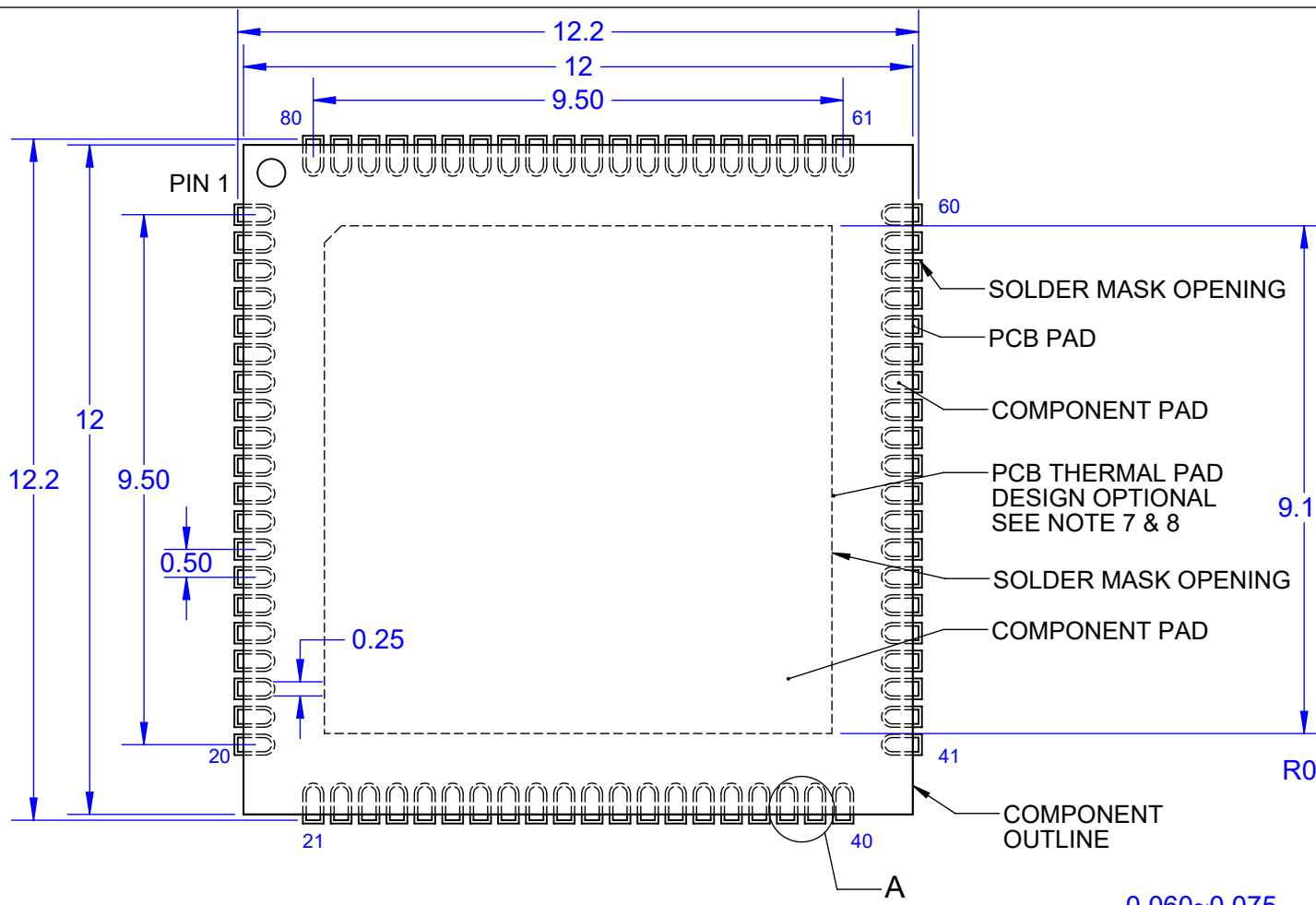


| PART NUMBER | DAISY CHAIN | PACKAGING | RoHS Pb-FREE | MSL LEVEL | DUMMY DIE |
|-------------------|-------------|------------|--------------|-----------|-----------|
| QFN80T.5-T-DE-D | YES | JEDEC TRAY | YES | 1 | YES |
| QFN80M.5-T-DE-D | YES | TUBE | YES | 1 | YES |
| QFN80E7A.5-T-DE-D | YES | REEL | YES | 1 | YES |
| QFN80T.5-T | NO | JEDEC TRAY | YES | 1 | NO |
| QFN80M.5-T | NO | TUBE | YES | 1 | NO |

OTHER PART NUMBER COMBINATIONS AVAILABLE. CONTACT TOPLINE.

| | | | |
|---|-----------|-----------------------|--------------|
| TopLine® | | | |
| TITLE 80-LEAD 12mm P0.5mm QFN DAISY CHAIN | | | |
| SCALE NONE | SIZE A | DRAWING NO. 169836 | REV A |
| DO NOT SCALE DRAWING | | | SHEET 4 OF 5 |

PC BOARD LAYOUT DIMENSIONS IN MM VIEW FROM TOP



DETAIL A
SCALE 40 : 1

Notes: (Unless Otherwise Specified).

- 1) DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE.
DESIGNERS SHOULD USE THEIR OWN KNOWLEDGE BASE WHEN DESIGNING THE PCB.
- 2) SURROUND EACH SIDE OF I/O PERIMETER PADS WITH 0.060~0.075 mm (NSMD) SOLDER MASK OPENING (2.4~3.0mils) OPTIONALLY OK TO USE RECTANGLE (NSMD) MASK OPENING AROUND I/O PADS.
- 3) ROUNDED PCB LAND PADS REDUCE SOLDER BRIDGING. PAD CHAMFER ANGLE MAY VARY.
- 4) PCB LANDS SHOULD BE 0.2mm LONGER THAN THE PACKAGE I/O PADS.
- 5) THE WIDTH OF PERIMETER PCB PADS SHOULD MATCH (1:1) THE WIDTH OF THE PACKAGE PADS.
- 6) REFER TO INDUSTRY REFERENCES SUCH AS IPC-SM-782 FOR PCB LAND PATTERN DESIGN.
- 7) THERMAL GROUND PADS MAY BE CHANGED TO SUITE REQUIREMENTS OF THE DESIGNER.
 - A) MAKE COPPER THERMAL PAD AS LARGE AS POSSIBLE.
 - B) DRILL MULTIPLE THERMAL VIAS 0.25~0.33mm DIAMETER USING 0.8~1.2mm PITCH GRID.
 - C) PLATE THERMAL VIA BARRELS WITH 1-OUNCE COPPER (18µm).
 - D) TENT (COVER) THERMAL VIAS WITH SOLDER MASK 0.1mm LARGER THAN THE VIA DIAMETER.
- 8) STENCIL DESIGN MAY BE CHANGED TO SUIT REQUIREMENTS OF THE DESIGNER.
 - A) LASER CUT STENCIL 0.125mm (5mil) THICK. APERTURE SIZE-TO-LAND RATIO OF 1:1.
 - B) THE SOLDER PASTE OPENING IN THE THERMAL PAD AREA SHOULD BE A MATRIX ARRAY OF SMALLER APERTURES INSTEAD OF ONE LARGE APERTURE TO CONTROL PASTE AMOUNTS.
 - C) APPLY 50% TO 80% SOLDER PASTE COVERAGE IN THE PAD AREA.

| | | | |
|---|--------|--------------------|--------------|
| TopLine® | | | |
| TITLE 80-LEAD 12mm P0.5mm QFN DAISY CHAIN | | | |
| SCALE 8:1 | SIZE A | DRAWING NO. 169836 | REV A |
| DO NOT SCALE DRAWING | | | SHEET 5 OF 5 |